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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,990	09/12/2003	John D. Hottovy	CPCM:0023/FLE210318US1	6088
7590	01/19/2006		EXAMINER	
Fletcher Yoder Attn: Michael G. Fletcher P.O. Box 692289 Houston, TX 77269-2289			LU, C CAIXIA	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/660,990

Applicant(s)

HOTTOVY ET AL.

Examiner

Caixia Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 21-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/9/04</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Double Patenting***

1. Claims 1-4, 6,7, 9-15, and 21-27 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over (i) claims 1-25 of U.S. Patent No. 6,239,235, (ii) claims 1-19 of U.S. Patent No. 6,806,324, (iii) claims 1-9 of U.S. Patent No. 6,743,869, and (iv) claims 1-13 of U.S. Patent No. 6,815,511. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter of the instant claims is the obvious variations of claims of the cited US patents.

### ***Claim Rejections - 35 USC § 112***

2. Claims 5 and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

#### **Claims 5 and 8**

The base of the percentage of the monomer is not defined.

### ***Claim Rejections - 35 USC § 102***

3. Claims 1-4, 6,7, 9-15, and 21-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Hottovy et al. (US 6,239,235) for the same rationale as set forth in the previous Office action mailed August 25, 2005.

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4. Claims 1-15 and 21-27 are rejected under 35 U.S.C. 102(E) as being anticipated by Kendrick et al. (US 2002/0173598 A1, now US Pat. No. 6,833,415, the application publication is cited in the rejection) for the same rationale as set forth in the previous Office action mailed August 25, 2005.

***Response to Arguments***

5. Applicants' arguments filed November 28, 2005 have been fully considered but they are not persuasive.

The rejection over claim 2 under 35 U.S.C. 112, first paragraph is withdrawn in view of applicants' amendment.

The rejections of claims 5 and 8 is because the base of the percentage of the monomer is not defined. Applicants have indicate in the response of November 28, 2005 that the percentage is the weight of ethylene over the amount of liquid in the reactor, however, such limitation must inserted to the claims in order to overcome the rejections.

The claimed ethylene concentration in the loop reactor of claim 5 is too low and not in the conventional range. Applicants have indicated in the response that claims 5 expresses the variation in monomer concentration as an absolute difference in percentage. It also appears that the limitation of "a range of concentration of olefin monomer within the loop reaction zone is 1.05% [sic] or smaller" of claim 5 actually means --a range of concentration variation of olefin monomer within the loop reaction zone to be 1.05 wt% or smaller based on the total amount of liquid in the reactor-- according to the disclosure of paragraph [0020] of page 6. Appropriate corrections to

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the claims are requested. In the descriptions of lines 8-9 of paragraphs of [0008] and line 7 of [0020], if the limitation of monomer (ethylene) concentrations are intended to mean monomer concentration variation ranges, appropriate amendments to the Specification are also requested.

Regarding obviousness-type double patenting rejections, Applicants argue that the examiner must make the difference between the inventions defined by claims and the reasons why a person of ordinary skill in the art would conclude that the invention defined in the present claims are obvious variations of the invention defined in the claims in the patents. The instant claims claim the same basic steps as the claims of the cited patent except few minor details such as the monomer feeds being symmetrically arranged around the reactor and the intermediate product having higher concentration of solid polyolefin particles than average concentration of the solid polyolefin particles in the slurry in the loop reaction zone. Because applicants did not disclose the type of symmetry of the arrangement, all arrangement of the monomer feeds of the reactor have some sort of symmetry. For example, when there are only two monomer feeds, the feeds would have a symmetric plane if they are on the same level of the loop and a  $C_2$  symmetry if they are not on the same level of the loop. The outlet for withdrawing product as shown in Figs. 2 and 3 of Patent 6,239,235, for example, is below the level of the reaction loop, therefore, the solid particle concentration in the withdrawn slurry must be higher than the solid particle concentration in the reaction loop due to the settlement caused by gravity. In view of the foregoing, the obviousness-type double patenting rejections are deemed to be

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proper. For the same token, the rejections under 35 U.S.C. 102(b) over Hottovy are also maintained.

Applicants also argue that Hottovy does not address the limitations in dependent claims such as each of the monomer feeds is separated controlled and the molecular weight distribution to be unimodal modal. A skilled artisan would have understood that the very reason for the using multiple feeds is to individually control them to provide a steady polymerization media. Under the polymerization condition of Hottovy's Example, a skilled artisan would realize that the ethylene/hexene copolymer has unimodal modal molecular weight distribution.

The Kendrick reference is U.S. patent or U.S. patent application publication of a pending or patented application that claims the rejected invention. Applicant's declaration of June 27, 2005 under 37 CFR 1.131(a) is insufficient for showing priority to Kendrick reference because the reference is claiming the same patentable invention, see MPEP § 2305, Requiring a Priority Showing. If the reference and this application are not commonly owned, the reference can only be overcome by establishing priority of invention through interference proceedings. However, the instant claims are not free of rejections rather than the rejections over Kendrick reference, an interfere can not provoked at this time.

Finally, at the end of claim 1, a term such as "of" should be inserted before the phrase "the fluid slurry".

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached at (571) 272-1114. The fax numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.



Caixia Lu, Ph. D.  
Primary Examiner  
January 9, 2006